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10/663,166

09/15/2003

Kevin Lahey

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EXAMINER

HO, DUC CHI

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action SummaryApplication No. **JK**

10/663,166

Applicant(s)

LAHEY ET AL.

Examiner

Duc C. Ho

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32, 34-45, 47-59 and 61-69 is/are rejected.
- 7) ☒ Claim(s) 33, 46 and 60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-14, 17-32, 34-45, and 47-55, 57-59, and 61-69 are rejected under 35 U.S.C. 102(e) as being anticipated by Molteni et al. (U.S. 2004/0066759), hereinafter referred to as Molteni.

Regarding claim 1, Molteni discloses method for a wireless station to determine network metrics prior to associating with an access point of a wireless network.

a. obtaining a signal from each access point available to the mobile device, wherein the signal includes source information (the mobile station 111-fig.1 obtains signal from AP1 and AP2 in the form of a beacon MAC(L2) that provides information for access points, see 0031);
and

b. obtaining characteristic information about each access point and characteristics of service provided by the access point using the source information (the mobile station is able to obtain information as required by station for establishing and maintaining and association with the AP).

Regarding claim 2, the signal is a beacon signal.

Regarding claim 3, the mobile station is able to compare the signal strength of the access points and deciding upon which one to associate with, see 0033.

Regarding claim 4, the access point to be associated with may be the one that matches a criteria such as previous association, see 0145.

Regarding claim 5, information provided from the beacon signal is resident within the SSID, and inherently include an address, see 0033.

Regarding claim 6, the address of an access point may be a URL address.

Regarding claim 7, the address of an access point may be a Ipv6 address, see 0029.

Regarding claim 8, the information includes L2 information, and network layer (L3) information, see 0010.

Regarding claim 9, each access point has its own Ipv6 address, therefore, a mobile station is capable of associating an access point's Ipv6 address for an application communication, see 0069, 0075, and 0123.

Regarding claim 10, a mobile station uses separate Ipv6 address for separate connection to each access point.

Regarding claim 11, information obtained from an access point at the mobile station is possible without forming a connection to the access point.

Regarding claim 12, an access point is available if the mobile station is within a range of signal strength to communicate with the access point.

Regarding claim 13, the characteristic of service includes cost of access, see 0075.

Regarding claim 14, Molteni discloses method for a wireless station to determine network metrics prior to associating with an access point of a wireless network. The mobile station 111-fig.1 obtains signal from AP1 and AP2 in the form of a beacon MAC(L2) that provides information for access points, see 0031. The beacon contains a unique identifier for the access point called the SSID, and provides services to the mobile station under Ipv6. In other words, the mobile station is capable of using a plurality of applications from different access points via their Ipv6 addresses.

Regarding claim 17, Molteni discloses these limitations. Please see the rejections of claims 1-4.

Regarding claim 18, Molteni discloses method for a wireless station to determine network metrics prior to associating with an access point of a wireless network.

a. obtaining a signal from each access point available to the mobile device, wherein the signal includes source information (the mobile station 111-fig.1 obtains signal from AP1 and AP2 in the form of a beacon MAC(L2) that provides information for access points, see 0031);
and

b. obtaining characteristic information about each access point and characteristics of service provided by the access point using the source information (the mobile station is able to obtain information as required by station for establishing and maintaining and association with the AP);

c. determining a preferred access point by comparing the characteristic information to criteria and determining the access point which most closely matches the criteria (the mobile station is able to compare the signal strength of the access points and deciding upon which one to associate with, see 0033. The access point to be associated with may be the one that matches a criteria such as previous association, see 0145).

Regarding claim 19, the mobile station is able to compare the signal strength of the access points and deciding upon which one to associate with, see 0033.

Regarding claim 20, the connection is established using communication complying with an IEEE 802.11 standard.

Regarding claims 21-29. These claims have the same limitations as of claims 5-8, 12-13, 11, and 9-10, respectively. Therefore, these claims are rejected for the same reason as of claims 5-8, 12-13, 11, and 9-10, respectively.

Regarding claim 30, Molteni discloses method for a wireless station to determine network metrics prior to associating with an access point of a wireless network.

a. a communication interface configured to receive communications from access points available to the mobile device, the communications including a beacon signal from each available access point, wherein the beacon signal includes source information (the mobile station 111-fig. 3A includes a transceiver interface 303, see 0031-0033, and 0037-0041); and

b. a controller (the mobile station 111-fig.3A includes a host processor 307) coupled to the communications interface to obtain characteristic information about each access point and characteristics of service provided by the access point using the source information (the processor 307 coupled to the interface 303 for obtaining information about each access point and characteristics of service provided by the access point using the information, see 0031-0041).

Regarding claims 31-32, and 34-42. These claims have the same limitations as claims 3-4, and 5-8, 11-13, 9-10, respectively. Therefore, these claims are rejected under Molteni for the same reason set forth in the rejection of claims 3-4, and 5-8, 11-13, 9-10, respectively.

Regarding claim 43, this claim has the same limitations as claim 30. Therefore, claim 43 is rejected under Molteni for the same reason set forth in the rejection of claim 30.

Regarding claims 44-45, and 47-55. These claims have the same limitations as claims 3-4, and 5-8, 11-13, 9-10, respectively. Therefore, these claims are rejected under Molteni for the same reason as of claims 3-4, and 5-8, 11-13, 9-10, respectively.

Regarding claim 57, Molteni discloses method for a wireless station to determine network metrics prior to associating with an access point of a wireless network.

a. a plurality of access points (the access point AP1, AP2) each including:

i. a wireless interface through which access point communications are sent and received including a beacon signal having source information (each inherently includes a wireless interface through which communications are sent including a beacon signal having information, see 0031); and

ii. a server interface configured to couple to one or more internet servers to provide internet communications with the servers for devices communicating through the wireless interface (each access point, i.e. the AP1 inherently includes a server interface so as to provide internet connection with the service X-fig. 1);

b. a mobile device (a mobile station 111-fig. 3A inherent includes a manager managing connectivity for the mobile device) configured to communicate with the wireless interface and including a network connection manager which adaptively manages connectivity for the mobile device, the network connection manager comprising:

i. a communications interface (an interface 303-fig. 3A) configured to receive the access point communications; and

ii. a controller (a processor 307-fig.3A) coupled to the communications interface to obtain characteristic information about each access point available to the mobile device and characteristics of service provided by the access points using the source information.

Regarding claims 58-59, and 61-69. These claims have the same limitations as claims 3-4, and 5-8, 11-13, 9-10, respectively. Therefore, these claims are rejected under Molteni for the same reason as of claims 3-4, and 5-8, 11-13, 9-10, respectively.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 15-16, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molteni, in view of Chandranmenon et al. (US 2004/0077341).

Regarding claim 15, Molteni discloses all claim limitations, except a mobile device has a plurality of interfaces so that the mobile device can send communications through one of a plurality of interfaces based on the separated Ipv6 address and corresponding application.

One skill in the art would recognize the advantage of having a mobile device to be equipped with multiple interfaces such as kind of wireless (e.g., 3G and 802.11) and wired (e.g., Ethernet) network interfaces in order to provide separate applications to respective access points.

Chandranmenon discloses multi-interface mobility client. Figure 2 illustrates a plurality of interfaces for mobile device, see 0028-0035.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Molteni with Chandranmenon.

The suggestion/motivation for doing so would have been to provide communications from the mobile device through one of interfaces based on the separate IPv6 address of each access point and its corresponding application.

Therefore, it would have been obvious to combine Chandranmenon with Molteni to obtain the invention as specified in claim 15.

Regarding claim 16, please see the rejection of claim 15. The mobile device is capable of receiving communications through one of plurality of interfaces.

Regarding claim 56, Molteni discloses all claimed limitations, except (1) a plurality of interfaces each configured to send and receive communications for one of a plurality of applications used by the mobile device, and (2) a controller coupled to the plurality of interfaces.

One skill in the art would recognize the advantage a controller of a mobile device is to be equipped with multiple interfaces such as kind of wireless (e.g., 3G and 802.11) and wired (e.g., Ethernet) network interfaces in order to provide separate applications to respective access points corresponding to the IPv6 address.

Chandranmenon discloses multi-interface mobility client. Figure 2 illustrates a plurality of interfaces for mobile device, see 0028-0035, wherein the mobility client function application

106 as a controller couples to the plurality of interfaces in order to provide applications corresponding to its access points.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Molteni with Chandranmenon.

The suggestion/motivation for doing so would have been to provide a mobile device an advantage-that is to process at least one application through a particular interface, and that interface is configured corresponding with the access point's Ipv6 address.

Therefore, it would have been obvious to combine Chandranmenon with Molteni to obtain the invention as specified in claim 56.

Allowable Subject Matter

6. Claims 33, 46, and 60 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cabana (US 2004/0085948); Alone et al.(US 2004/0110530); Herrod (US 2003/0065784) are cited to show method of and apparatus for adaptively managing connectivity for mobile devices through available interfaces, which is considered pertinent to the claimed invention.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner



Duc Ho

12-02-05